Work Order ID 62760



Page 1

Thursday, October 07, 2010 3:11:59 PM Item ID: / D206-642-541 Accept Setup Start **Revision ID:** Stop Item Name: Replacement Skidtube **Start Date:** Start Qty: 1.00 10/7/2010 **Cust Item ID: Required Date: 10/15/2010** Req'd Qty: 1.00 **Customer:** Reference: Run Start Date: 10-07 Tooling: Process Plan: Approvals: Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. Work Center ID Description Qty **Run Hours** Code Qty Number Stamp Draw Nbr 1,7 **Revision Nbr** D3274 D IIN-D206-642 Rev M 100 0.00 DOCUMENT CONTROL

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
•				÷	·	المسا			
						Ť			
	- 3				ļ		,		
Dart No		DAD #- Foult Cotogony NC	D. Voc	No DO	·	Dotos			

Part No:		_ PAR #:	Fault Category:	NCR: Yes No DQA:	Date:
•	Resolution:	· · · · · · · · · · · · · · · · · · ·	Disposition:	QA: N/C Closed:	Date:

NCR:	# -	W	ORK OR	DER NON-CONFORMANC	E (NCR)			
	<u> </u>	Description of NC	Corrective Action Section B			Verification		Ι
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Approval Chief Eng	Approval QC Inspector
ī	The contest							
, "		The second second						
						The state of the s		
** (•			,		
						:		
							,	

Page 2

Thursday, October 07, 2010 3:11:59 PM

Item ID:

D206-642-541

Accept



Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/7/2010

Start Qty: 1.00 **Required Date: 10/15/2010**

Req'd Qty: 1.00



Cust Item ID: Customer:

Reference:

Process Plan:

Date:

Date:____

Tooling:

SPC (Y/N):

Date:

Date:

Run Start

Stop



Sequence ID/ Work Center ID

110



Skidtubes

Skidtubes

Operation Description Set Up/ **Run Hours**

0.00

Tool ID

Tool # Plan

Code

Accept Qty

Reject Qty

Reject Insp.

Number Stamp

Skidtubes

Memo

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foilo 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and QSIQQ4 AR Aluminum Rod Batch: M/11.38

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

4- grind fwd cap weld on top surface only

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

W/O:		WORK ORDER CH	IANGES		•		, , , ,
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
					}	į.	
Part No):	PAR #: Fault Category:	NCR: Yes	No DO	Δ.	Date:	

Resolution:		esolution:	Disposition	n:	QA: N/C Clos	sed:	Date: _	
		WORK ORDER NON-CONFORMANCE (NCR)						
		Description of NC	-	Corrective Action Section B Initial Action Description Sign & Chief Eng Date		Verification	Annyous	Ammanual
DATE	STEP	Section A				Section C	Approval Chief Eng	Approval QC Inspector
			·		1			
						,		
		•				,		
·								

Work Order ID 62760

Thursday, October 07, 2010 3:11:59 PM



Page 3

Item ID:

D206-642-541

Accept

Setup Start



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/7/2010

Start Qty: 1.00

Required Date: 10/15/2010

Req'd Qty: 1.00



Date:

Cust Item ID: Customer:

Reference:

Process Plan: _____

Date:

Tooling:

Date:

Date:

Start

Stop

Stop

Sequence ID/ Work Center ID

120



HandFinish Hand Finishing Operation **Description**

Chemical Conversion Coat per QSI005 4.1

Set Up/ Run Hours

0.00

SPC (Y/N):

0.00

Tool ID

Tool # Plan Accept Qty Code

Reject Qty

Run

Reject Number

Insp. Stamp

130

Quality Control

QC3- Inspect Part Finish

Memo

Memo

0.00

0.00

140

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

W/O:		WORK ORDER CHANGES	WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
					<u> </u>					
Part No):	PAR #: Fault Category: N	CR: Yes	No DQ	Δ:	Date:	7 -			

Resolution: _____ Disposition: ____ QA: N/C Closed: ____ Date: ____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
-		Description of NC	Corrective Action Section B		Varification Assessed	Annuoval			
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector	
							·		
						,]	
er.									
<u></u> <u></u>				· · · · · · · · · · · · · · · · · · ·					
							·		

•			
Work	Order	· ID	62760

Thursday, October 07, 2010 3:11:59 PM



Page 4

Insp.

Item ID: D206-642-541 Accept Setup Start **Revision ID:** Stop Replacement Skidtube Item Name: **Start Date:** 10/7/2010 Start Qty: 1.00 **Cust Item ID: Required Date: 10/15/2010** Req'd Qty: 1.00 **Customer:** Reference: Run Start Process Plan: Date: Tooling: Approvals: Date: Stop Date: _____ SPC (Y/N): Date: Sequence ID/ **Tool ID** Tool # Plan Reject Operation Set Up/ Accept Reject **Work Center ID** Number Stamp Description Qty Qty **Run Hours** Code 150 0.00 Skidtubes Skidtubes 0.00 Memo Skidtubes 1-Open Ø0.313" and 0.375" crossbolt spacer holes using DT8743 as per Dwg 10-10-21 2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube 3-Bond web in place as per Dwg D3274 & QSI 015. A/R \square Sikaflex-291 \square \square \square BE 10/19/28 Sikaflex expire date: \(\int \textit{D} \square \textit{JO} \textit{D} \textit{O} \textit{D} \textit{D} \textit{Time: } \(\textit{D} \textit{

160

QC5- Inspect part completeness to step on W/O

0.00

0.00 8 Wolala

Quality Control

Memo

W/O:		WORK ORDER CHANGES	*
DATE	STEP		proval nspector
,			-

Part No:		PAR #:	Fault Category:	NCR: Yes No DQA:	Date:
	Resolution:		Disposition:	QA: N/C Closed:	Date:

NCR:		WORK ORDER NON-CONFORMANCE (NCR)									
		Description of NC		Corrective Action Section	<u></u> В	Verification	Approval	Approval			
DATE	STEP	Section A Initial Act	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspecto				
							·				
					§.						
					<u>.</u>						
				:							
					1						



Page 5

D206-642-541 Item ID: Accept Setup Start **Revision ID:** Stop Replacement Skidtube Item Name: Start Qty: 1.00 **Start Date:** 10/7/2010 **Cust Item ID: Required Date:** 10/15/2010 Req'd Qty: 1.00 **Customer:** Reference: Run Start Process Plan: Date: Approvals: Tooling: Date: Stop SPC (Y/N): Date: Date: Sequence ID/ **Operation Tool ID** Tool # Plan Reject Set Up/ Accept Reject Insp. Work Center ID Description Qty Code Number Stamp **Run Hours** Qty 170 0.00 Skidtubes 0.00 Skidtubes Memo Skidtubes 1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position. 2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2 OPEN HOLES TO .297". Deburr 3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES) REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES 4- Countersink crossbolt spacer holes as per Dwg D3274 5- prepare for welding QC5- Inspect part completeness to step on W/O

Quality Control

Memo

W/O:		WORK ORDER CHANGES								
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
				*						
						; ·		,		
The state of the s										

Part No:	PAR #:	Fault Category:	NCR: Yes No DQA:	Date:
1	Resolution:	Disposition:	QA: N/C Closed:	Date:

NCR: WORK ORDER NON-CONFORMANCE (NCR)								
	T	Description of NC		Corrective Action Section B	Verification	Approval	Approval	
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector
					• .			
					0			\
	,				**			
				:			t -	
**************************************		1+						
i - Fight T	3		,					
	<i>Y</i> . •	·						

Work Order ID 62760

Thursday, October 07, 2010 3:11:59 PM



Page 6

Item ID:

D206-642-541

Accept



Run

Accept

Qty

Setup Start



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/7/2010

Start Qty: 1.00

Req'd Qty: 1.00 **Required Date:** 10/15/2010

Cust Item ID

Customer:

Tool ID

Reference:

Approvals:

Date:

Date:

Tooling:

Date:

Date:

Tool # Plan

Code

Start

Reject.

Qty

Stop

Reject



Number Stamp

Insp.

Sequence ID/ Work Center ID

190

Skidtubes Skidtubes

Operation Description

Set Up/ **Run Hours**

SPC (Y/N):

0.00

Skidtubes

Memo

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use

aluminum rod A/R□□Aluminum Rod□ ///1/

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

200

QC5- Inspect part completeness to step on W/O

0.00

Quality Control

Memo

0.00

Siolnles

Dart Aerospace Ltd

				•	1				
W/O:		, , , , , , , , , , , , , , , , , , , ,	W	ORK ORDER CHANGE	ES		·		, ,
DATE	STEP	PRO	OCEDURE CHA	ANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
								• • •	
									.•
-									
Part No	:	PAR #:	Fault Cate	egory:	NCR: Yes	No DQ	A :	_ Date: _	
	R	esolution:	Disposition	on:	QA: N/C	Closed:		Date: _	
NCR:			WORK ORD	ER NON-CONFORMA	NCE (NC	R)			
DATE	STEP	Description of NC		on B	Verific	cation	Approval	Approval	
	J.E.	Section A	Initial Chief Eng	Action Description Chief Eng	Sign Dat	e Secti	on C	Chief Eng	QC Inspector
ı						ļ			
	!								t T
					·				
								ļ	
						,			
		·							

Work Order ID 62760

Thursday, October 07, 2010 3:11:59 PM



Page 7

Item ID:

D206-642-541

Accept

Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/7/2010

Start Qty: 1.00

Required Date: 10/15/2010

Req'd Qty: 1.00



Cust Item ID:

Customer:

Tool ID

Reference:

Approvals:

Process Plan:

Operation

Description

Date:

Tooling:

Date:

Run

Start

Stop



Date:

QC10- Inspect visual per QSI004- ground welds

SPC (Y/N):

Date:

Tool # Plan

Code

Accept Qty

Reject Qty

Reject Insp. Number Stamp

BL10-11-4,

Sequence ID/ **Work Center ID**

210

Set Up/ **Run Hours**

Memo

Quality Control

220

HandFinish

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

230

Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

0.00

1 Bf 10-11-15

W/O:		WORK ORDER CHA	WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
		,					:		
·							4		
Part No):	PAR #: Fault Category:	NCR: Yes	No DQ	A:	Date:	1		

Resolution: _____ Disposition: ____ QA: N/C Closed: ____ Date: ____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)									
		Description of NC		Corrective Action Section B	<u> </u>	Verification	Approval	Approval			
DATE	STEP	Section A	Initial Action Description Sign & Chief Eng Chief Eng Date		Sign & Date	Section C	Chief Eng	Approval QC Inspector			
						·					
				•							
•,					ļ						
•		•		14		,					
								,			
			·								

Work Order ID 62760

Thursday, October 07, 2010 3:11:59 PM



Page 8

Item ID:

D206-642-541

Accept



Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/7/2010

Start Qty: 1.00

Required Date: 10/15/2010

Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan: ___ Date:

Date:_____

Tooling:

SPC (Y/N):

0.00

0.00

Date:

Date:

Run

Accept

Qty

Start



Stop

Insp.

Sequence ID/ Work Center ID

240

Quality Control

Operation Description

QC3- Inspect Part Finish

Memo

Set Up/ **Run Hours**

10/11/01

Tool ID

Code

Tool # Plan

Otv

Reject

Number Stamp

Reject

250

HandFinish

Hand Finishing

HandFinishing

10 mol M (=

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. A/R | N/A | LPS-3 | 14 109956

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

A/R □ Sikaflex-291 □ 人入 115 / 1년□

Sikaflex expire date:

10101 I

260

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Inspect Nut Plate & Inserts

M 10 11 04 /1)

W/O:			WORK ORDER CHANGES							
DATE	STEP	PRO	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
							7.77.			
Part No			Fault Category: NCR							
	R	esolution:	Dispositio	n:	_ QA:	VC Clos	sed:		Date: _	
NCR:			WORK ORD	ER NON-CONFORMA	ANCE	(NCR)				
DATE	STEP	Description of NC		Corrective Action Section B		Verific		ation		Approval
DAIL	SILF	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Secti	on C	Chief Eng	QC Inspector
	[i.	
					·					
				,						
	1				1				I	

W	ork	Or	der	ID	62	760	N

Thursday, October 07, 2010 3:11:59 PM



Page 9

D206-642-541 Accept Item ID: Setup Start **Revision ID:** Stop Replacement Skidtube Item Name: **Start Date:** 10/7/2010 Start Qty: 1.00 **Cust Item ID:** Req'd Qty: 1.00 **Required Date:** 10/15/2010 **Customer:** Reference: Run Start Date: **Tooling:** Approvals: Process Plan: Date: Stop Date: SPC (Y/N): Date: Sequence ID/ Tool ID Tool # Plan Reject Reject Operation Set Up/ Accept Insp. Qty Qty Work Center ID **Run Hours** Code Number Stamp Description 270 0.00 HAND FINISHING RESOURCE #1 HandFinish Memo 1-Install wearpads & gaskets as per Dwg D3274. Hand Finishing 2-Install ring as per Dwg D3274 Sikaflex expire date: 1110 3-Inspect for foreign objects as per QSI 024 4-Spray inside of tube on both sides of web with LPS-3 \sim A/R LPS-3 Batch: VIA 5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive. A/R□□Sikaflex-291 □ MILLSIDE Sikaflex expire date: 1 11 (o (280 QC5- Inspect part completeness to step on W/O 8 woluloy

Quality Control

QC

Memo

Dail Ac	Tospace	Liu								•		
W/O:			WORK ORDER CHANGES									
DATE	STEP	PRO	OCEDURE CHAN	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
							_					
Part No)-	PAR #:	Fault Cateo	MORW:	NC	D: Vas	No DO	<u> </u> 	Date			
i dit ito		esolution:										
NCR:			WORK ORDE	R NON-CONFO	RMANCI	E (NCF	R)					
DATE		Description of NC		Corrective Action Section			Verific	ation	Approval	Approval		
DATE	SIEP	TEP Description of NC Section A	Initial Chief Eng	Action Descrip Chief Eng	otion	Sign 8 Date	k Secti		Chief Eng	QC Inspector		
					-0.024							
	-						,					

Work Order ID 62760

Thursday, October 07, 2010 3:11:59 PM



Page 10

Item ID:

D206-642-541

Accept

Setup Start

Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/7/2010

Start Qty: 1.00

Required Date: 10/15/2010 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Date: _____ Tooling:

SPC (Y/N):

Set Up/

Run Hours

Date:

Date:

Run

Start

Stop

Stop



Sequence ID/ Work Center ID

290

Packaging

Packaging

Operation Description

Identify as per dwg & Stock Location:

0.00

0.00

Tool ID

Tool # Plan

Code

Accept Qty

Reject Reject Qty-Number

Insp. Stann

300

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

Memo

0.00

10/12/03 TC

Dart Ae	rospace	Lia							•
W/O:			WO	RK ORDER CHANGES			· · · · · · · · · · · · · · · · · · ·		
DATE	STEP	PRO	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		PAR #:	Fault Categ	jory: N	CR: Yes	No DQ	A:	Date: _	<u> </u>
	Resolution:		Disposition	: Q	A: N/C Clo	sed:		Date: _	
NCR:			WORK ORDE	R NON-CONFORMANC	CE (NCR))	***************************************		
DATE	CTED	Description of NC	Corrective Action Section			Verification		Approval	Approval
DATE	STEP	Section A	Initial Action Description Chief Eng Chief Eng		Sign & Date	Section C		Chief Eng	QC Inspector
								(
						-			

Picklist Print

Thursday, October 07, 2010 3:12:02 PM

Work Order ID: 62760

D206-642-541 Parent Item:

Parent Item Name: Replacement Skidtube



Start Date: 10/7/2010

Start Qty: 1.00

Required Date: 10/15/2010

Page 1

Required Qty: 1.00

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM

IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM□

IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD

as per PAR 08-015 DD verified by:EC IPP Rev:E 08-04-17

IPP Rev:F

08-06-02 add comment DD verified by:EC IPP Rev:G 08-10-09 revise details DD verified byEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190		Manufactured	No			110	Each	^73.0000	1	1			
Extrusion Round 3" 206				<u>Location</u> LG	47575	Loc (73 25	Loc Code				10-1	10-1
D3285-1		Manufactured	No		39874_	110	48 Each	141.0000	1 	1			
Сар				<u>Locatio</u> LG	<u>1</u>	Loc	<u>Oty</u> 141	Loc Code	_		_		
D2202 041		N/ C	Ma		52511 52647	150	74 67 Each	2.0000			_ BE	espoli	iy
D3282-041 Float Web (206L/407)		Manufactured	No		·	130	Eacii	2.0000		1			
- (200L/407)				<u>Locatio</u> LG	<u>n</u>	<u>Loc</u>	Oty 2	Loc Code					
				LO	59886		2		-				

B 62947

BE 10/10/28

W/O:		WORK ORDER C	HANGES				
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
			·				
			·				
Dart N		DAD # . Foult Cotogony	NCP: Vos	N. DO			Poto

Part No:		PAR #:	Fault Category:	NCR: Yes No DQA:	Date:
	Resolution:		Disposition:	QA: N/C Closed:	Date:

NCR:		WORK ORDER NON-CONFORMANCE (NCR)											
		Description of NC		Corrective Action Section B		Verification	Approval	Approval					
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector					
•													
	:												
		•					•						
		٩					**						

Thursday, October 07, 2010 3:12:02 PM

Work Order ID: 62760 Parent Item: D206-642-541 Parent Item Name: Replacement Skidtube **Required Date:** 10/15/2010 **Start Date:** 10/7/2010 Start Qty: 1.00 Required Qty: 1.00 D2649 Manufactured No 190 Each 65.0000 Cross Bolt Spacer Location Loc Qty LG 65 58545 2 60652 4 59 61496 D3275-1 Manufactured 190 Each 216.0000 12 No 12 Crossbolt Spacer Location Loc Qty Loc Code LG 216 53453 8 61646 102 62399 106 CR3212-4-03 Purchased No 250 Each 1,888.000 Cherry Rivet Location Loc Qty Loc Code ST311 1888 111359 5 112314 2 114436 448 114450 71 114859 1362 D3415-041 Manufactured No 250 Each 52.0000 Nut Plate Location Loc Code Loc Qty ST056 52 33842 52

Dart Ae	rospace	e Ltd								•
W/O:			WO	RK ORDER CHANGE	S					
DATE	STEP	PRO	PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
į										
								ţ		
Part No	:	PAR #:	Fault Categ	jory:	NCF	R: Yes N	lo DQ .	A :	_ Date: _	
	R	esolution:	Disposition	I	QA:	N/C Clo	sed:		Date:	·
NCR:		1	WORK ORDE	R NON-CONFORMA	NCE	(NCR)				
DATE	OTED	Description of NC		Corrective Action Section	n B		Verific	cation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	1	ion C	Chief Eng	QC Inspector

iion.													
		Description of NC		Corrective Action Section B		Verification	Anneoval	Approval QC Inspector					
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Approval Chief Eng						
,	·												
					ŀ		,						
	-	4											
						!							
	1												
						,							

Thursday, October 07, 2010 3:12:02 PM

Work Order ID: 62760 Parent Item: D206-642-541 Parent Item Name: Replacement Skidtube **Start Date: 10/7/2010 Required Date: 10/15/2010** Start Qty: 1.00 Required Qty: 1.00 446.0000 CCR264SS3-3 Purchased No 250 Each 10/11/01 Cherry Rivet Location Loc Oty Loc Code ST311 446 112314 4 113539 44 113973 398 ALS4-1032-130 250 Each 1,147.000 78 Purchased No 10/11/61 Insert Location Loc Oty Loc Code 1098 PKG11 1098 114723 MUSGII ST282 10 110511 10 ST381 39 39 114654 270 21.0000 D3536-15 Manufactured No Each Gasket Location Loc Qty Loc Code FP 9 56055 60875 FP11

11

59238 62459

Duit Ac	ospace	Liu											
W/O:			WORK ORDER CHANGES										
DATE	STEP	PRO	CEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector				
		•											
								ì					
					ŀ								
Part No	:	PAR #:	Fault Categ	ory:	NCR: Ye	s No DG	A:	Date:					
	R	esolution:	Disposition	:	QA: N/C	Closed:		Date: _					
NCR:		\	WORK ORDE	R NON-CONFORMA	NCE (NO	CR)							
DATE	STEP	Description of NC		on B	Verif	cation	Approval	Approval					
DATE		TEP Description of NC Section A	Initial Chief Eng	Action Description Chief Eng	Sig: Da	າ&∣ _{Sec}	tion C	Chief Eng	QC Inspector				
•		·											
													
						,							
	1		1		1	1		I	i				

Thursday, October 07, 2010 3:12:02 PM

Work Order ID: 62760 Parent Item: D206-642-541 **Required Date:** 10/15/2010 Parent Item Name: Replacement Skidtube Start Date: 10/7/2010 Start Qty: 1.00 Required Qty: 1.00 270 8.0000 D3536-23 Manufactured No Each 10/11/04 Gasket Location Loc Qty Loc Code B63391 FP011 61237 270 Each 23.0000 D3536-35 Manufactured No 16/11/0 Gasket Location Loc Qty Loc Code FP012 23 58683 1 61692 10 12 62462 D3536-39 270 12.0000 Manufactured No Each 10/11/04 Gasket Loc Qty Loc Code Location FP12 12 58215 1 11 58571 D3535-15 270 Each 12.0000 Manufactured No Wearshoe Location Loc Oty Loc Code 12 FP18 61241 6 62241

D ui. 710.	OSPACE									
W/O:			WC	ORK ORDER CHANGE	S				g (9	
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
							,			
				/						
Part No	:	PAR #:	Fault Category: NC			NCR: Yes No DQA: Dat				
Resolution:			Dispositio	n:	QA: N/C C	losed:		Date: _		
NCR:			WORK ORD	ER NON-CONFORMA	NCE (NC	R)				
DATE	STEP	Description of NC		Corrective Action Section			cation	Approval	Approval	
	0.2.	Section A	Initial Chief Eng	Action Description Chief Eng	Sign Date		ion C	Chief Eng	QC Inspector	
-	-					,				

Thursday, October 07, 2010 3:12:03 PM

Work Order ID: 62760 Parent Item: D206-642-541 Parent Item Name: Replacement Skidtube Start Date: 10/7/2010 **Required Date:** 10/15/2010 Required Qty: 1.00 Start Qty: 1.00 D3535-35 Manufactured No 270 Each 8.0000 Wearshoe Location Loc Qty Loc Code FP018 60865 D3535-39 Manufactured No 270 Each 17.0000 10/11/04 Wearshoe Location Loc Oty Loc Code FP18 17 58214 1 60233 16 D3535-23 Manufactured No 270 Each 19.0000 Wearshoe **Location** Loc Qty Loc Code FP 7 61830 7 FP021 20 60231 11 D3537-3 Manufactured No 270 Each 6.0000 Wearpad Location Loc Qty Loc Code FP17 1361674 60866

Dart Ae	rospace	Ltd							
W/O:			W	ORK ORDER CHAN	IGES				, » ·
DATE	STEP	PR	OCEDURE CH	ANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	:	PAR #:	Fault Cat	egory:	NCR: Ye	s No DC)A:	Date: _	
	Re	solution:	Dispositi	on:	QA: N/C	Closed:		Date: _	
NCR:			WORK ORI	DER NON-CONFOR	MANCE (NO	R)			
DATE	CTED	Description of NC			ection B	Verif	ication	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Initial Action Description Chief Eng Chief Eng		. 0 1	tion C	Chief Eng	QC Inspector
	1 1								
4									

Thursday, October 07, 2010 3:12:03 PM

Work Order ID: 62760 Parent Item: D206-642-541 Parent Item Name: Replacement Skidtube

Start Date: 10/7/2010

Required Date: 10/15/2010

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Wearpad

Manufactured

270

Each

14.0000

M 10/11/04

Location	Loc Oty	<u>.</u>	Loc Code		
FP		1 (362661	_	V G
55465		1	<i>y</i>	_	
FP017		6		_	
61986		6		_	
FP17		7		_	
57713		3		_	
60491		3		_	
61640		1		-	
2	270	Each	29.0000	80	80

AN960C10L

washer

washer

Purchased

No

xx 115832

480 HL 1014104

AN960C416 NAS1149C0463

Purchased

No

Location

107534

ST245

270

29 Each

29

Loc Qty

100.0000

Loc Code

Location	Loc Oty	Loc Code	
ST346	100		
100993	100	M 115 358	<u> </u>

W/O:			WO	RK ORDER CHANG	ES				
DATE	STEP	PR	OCEDURE CHAN	IGE	Ву	Date	Qty c	Approval Chief Eng / Prod Mgr	Approval QC Inspector
								, tou mg.	
								;	
			.,						
								:	
Part No	:	PAR #:	Fault Cate	jory:	_ NCR: Yes	No DQA :		Date: _	
	Re	solution:	Disposition	ı:	_ QA: N/C Cld	sed:		Date: _	
NCR:			WORK ORDE	R NON-CONFORMA	ANCE (NCR)			
DATE	STEP	Description of NC	ļ	Corrective Action Sect		Verifica	tion A	Approval	Approval
	JILI	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section	ı C	Chief Eng	QC Inspector
					:				
						,			
	1 1		i i		1	l .	ı		f .

Picklist Print

Thursday, October 07, 2010 3:12:03 PM

Page 7

Work Order ID: 62760 Parent Item: D206-642-541 Parent Item Name: Replacement Skidtube Start Date: 10/7/2010 **Required Date:** 10/15/2010 Start Qty: 1.00 Required Qty: 1.00 D3672-1 Manufactured No 270 855.0000 2 Each 10/11/01 Phenolic Washer Location Loc Oty Loc Code ST077 855 42329 150 705 52505 AN3C4A Purchased 270 Each No 1,650.000 **BOLT** Location Loc Oty Loc Code ST245 20 110139 20 ST303 42 115438 42 ST350 1588 114108 14 114416 12 114523 2 115300 560 115589 1000 AN4C5A Purchased No 270 Each 489.0000 **BOLT** Location Loc Qty Loc Code ST346 489 110552 112243 485

Dart Ae	rospace	Ltd			·				•
W/O:			WO	RK ORDER CHANG	ES				
DATE	STEP	PRO	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		The state of the s				<u></u>			
Part No	:	PAR #:	Fault Cate	jory:	_ NCR: Yes	No DQ	A:	_ Date: _	-
	Re	esolution:	Disposition	n:	_ QA: N/C CI	osed:		Date: _	
NCR:		\	WORK ORDE	R NON-CONFORM	ANCE (NCF	3)			
DATE	STEP	Description of NC Section A	Initial	Corrective Action Sect Action Description	ion B		cation	Approval	Approval
<u>-</u>		Section A	Chief Eng	Chief Eng	Date	Sect	ion C	Chief Eng	QC Inspector
				•					
									1

Thursday, October 07, 2010 3:12:03 PM

Work Order ID: 62760

Parent Item:

D206-642-541

Parent Item Name: Replacement Skidtube



Start Date: 10/7/2010

Required Date: 10/15/2010

Start Qty: 1.00

Required Oty: 1.00

D2646

Aft Cap

Manufactured

No

270

Each

44.0000

Location Loc Qty Loc Code FP-4 39 57332 39 fp5 61752 FP6 52663 270 Each 31.0000

Manufactured No

D3413-1

Ring

Location	Loc Oty	Loc Code
ST473	31	
51586	1	
53446	15	
61322	15	

Υ(

W/O:			W	ORK ORDER CHANGE	S				. 1
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng /	Approval QC Inspector
								Prod Mgr	
. 175			- N						
Part No	:	PAR #:	Fault Cate	gory:	NCR: Yes	No DQA	:	Date:	
	R	esolution:	Dispositio	n:	QA: N/C CI	osed:		Date: _	
NCR:	,		WORK ORD	ER NON-CONFORMAN	ICE (NCF	1)			
DATE	STEP	Description of NC		Corrective Action Section		Verifica	ation	Approval	Approval
DAIL	SIEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign 8 Date	Sectio		Chief Eng	QC Inspector
		·							
						,			
						,			



DESIG	CP	DRAWN BY	DART AEROSPACE USA, INC
CHEC	KED A	APPROVED	DRAWING NO. REV. D
ł	#	- #	D3274 SHEET 1 OF 4
DATE			TITLE SCALE
06.1	12.19		SKIDTUBE ASSEMBLY NTS
Α		04.03.15	NEW ISSUE
В		04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76
С		05.03.16	ADD -043; NEW INSERTS
D		06.12.19	NEW INSERTS, SS WEARSHOE + GASKET



Qty -041	Qty -043	Part Number	Description
Х		D3274-041	SKIDTUBE ASSEMBLY
	Х	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
. 1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER SHOPE
1	1	D3282-041	FLOAT WEB RETURN (F.)
1	1	D3285-1	CAP ENGINELETAL
1	1	D3413-1	RING UNCONTRACTED
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE SUBJECT TO THE SUBJECT TO T
1	1	D3535-23	WEARSHOE WITHOUT HERE
1	1	D3535-35	WEARSHOE WORK CRUS
1	1	D3535-39	100
1	1	D3536-15	GASKET NO.
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

- 1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2. DAMAGE TOLERANCE ON FWD BEND:

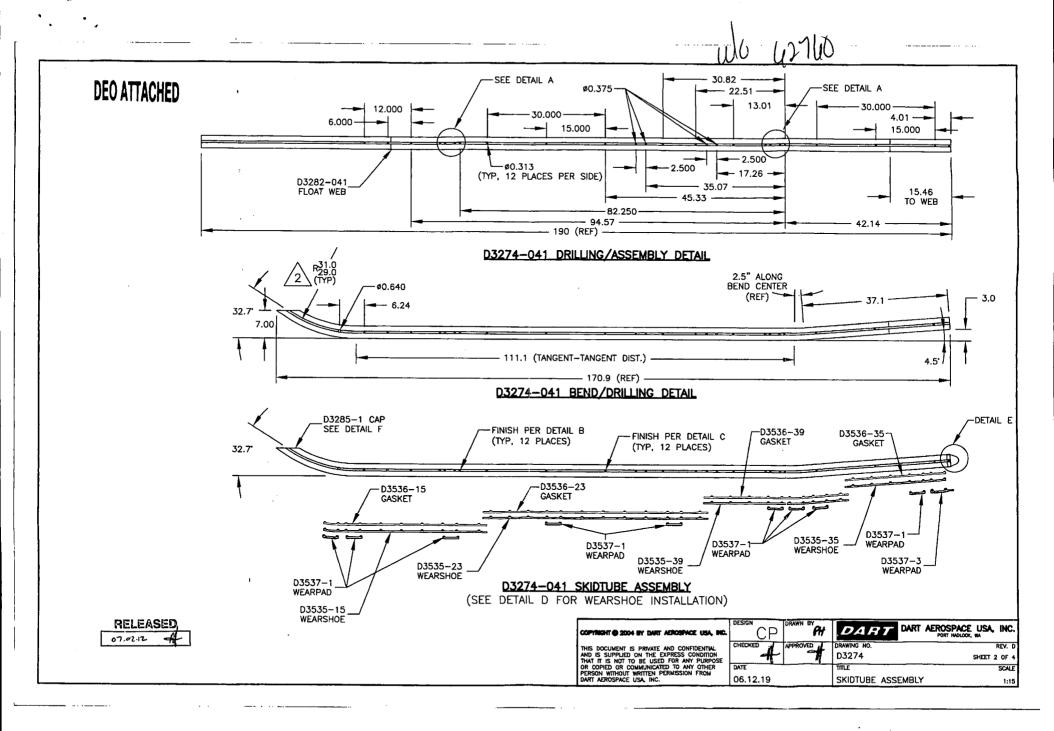
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.

- 3. ALL HOLES DRILLED ON CENTERLINES.
- 4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
- 5. WELDING TO BE DONE PER DART QSI 004.
- 6. FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
 POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- 7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
- 8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

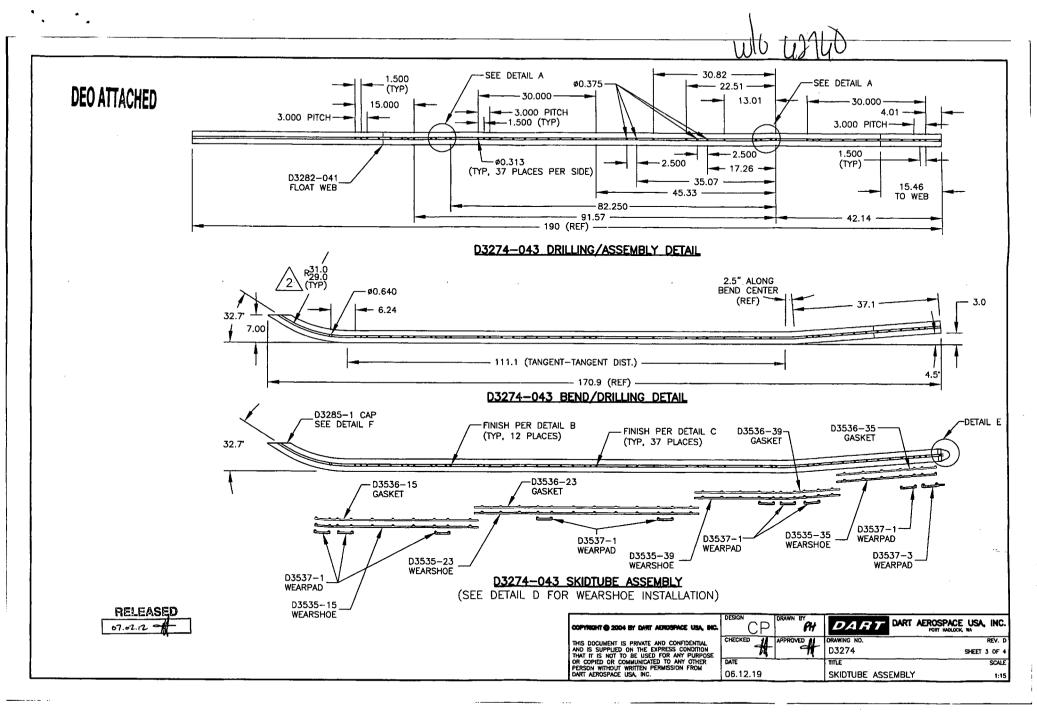
Copyright @ 2004 by DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

	•	•							
W/O:			WO	RK ORDER CHANGE	S			<u>-</u>	
DATE	STEP	PRO	OCEDURE CHAI	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No		PAR #:	Fault Categ	jory:	NCR: Yes	No DQ	A:	_ Date: _	
	Res	olution:	Disposition	:	QA: N/C CI	osed:		Date: _	
NCR:			WORK ORDE	R NON-CONFORMAL	NCE (NCF	1)			
DATE	OTED	Description of NC	<u> </u>	Corrective Action Section		Verific	ation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign 8 Date	Secti		Chief Eng	QC Inspector
					ŀ				
***						,			



	-								
W/O:			WO	RK ORDER CHANG	ES				` • • •
DATE	STEP	PRO	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
····									
Part No	:	PAR #:	Fault Categ	jory:	NCR: Yes	No DQ	A:	Date:	
	Re	esolution:	Disposition	:	_ QA: N/C C	osed:		Date: _	
NCR:			WORK ORDE	R NON-CONFORMA	NCE (NCF	₹)			
DATE	STEP	Description of NC		Corrective Action Section			cation	Approval	Approval
	0,2.	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date		on C	Chief Eng	QC Inspector
									}
			1						
					·				
						,			
		The state of the s							
		$\mathbf{v}_{\mathbf{b}}$							



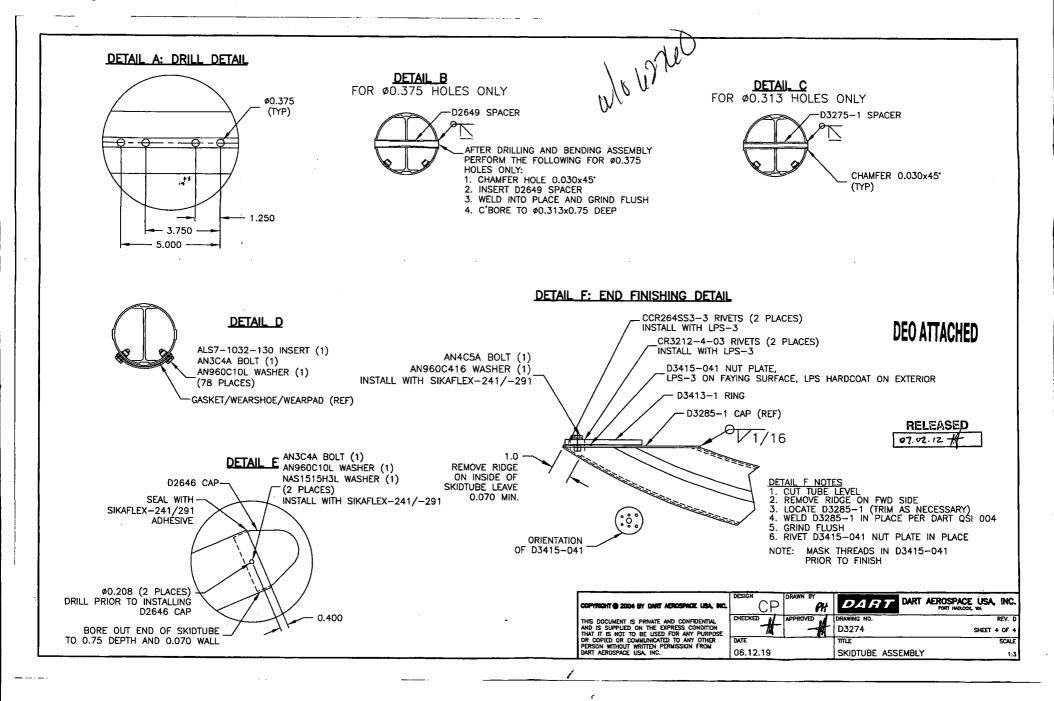
~ ~

. .

	D	art	Aer	osi	pace	Ltd
--	---	-----	-----	-----	------	-----

Dail Ac	iuspace	Liu								,
W/O:				WORK C	RDER CHANGES					
DATE	STEP		PR	OCEDURE CHANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
					ı					
·	<u> </u>									
Part No	:		PAR #:	Fault Category: _	N	ICR: Yes	No DQ	\ :	Date: _	
	R	esolution:		Disposition:		A: N/C	Closed:		Date:	

NCR:			WORK ORDE	ER NON-CONFORMAN	CE (NCR)			
		Description of NC		Corrective Action Section B			Approval	A
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
		•				:		
						,		
<i>z</i>		VIII. 100						
				4				



Dart Ae	rospace	Ltd	•							, u°
W/O:		WORK ORDER CHANGES								91
DATE	STEP	PRO	CEDURE CH	ANGE	Ву		By Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No:		PAR #:	Fault Ca	tegory:	NC	R: Yes	No DQ	A:	Date:	
	Re	solution:	Disposit	ion:	QA	: N/C Cld	sed:		Date: _	
NCR:		V	VORK OR	DER NON-CONFO	RMANCE	(NCR)			
DATE	CTED	Description of NC		Corrective Action	Section B	·····	Verifi	cation	Approval	Approval
DAIE	STEP	Section A	Initial Chief Eng	Action Descrip Chief Eng	tion	Sign & Date		ion C	Chief Eng	QC Inspector

DRAWING NO.	TITLE	REV. D DART AER	OSPACE USA, INC	C D.E.O. NO.	SHEET NO.	SCALE
D3274	SKIDTUBE ASSEMBLY	ENGIN	ERING ORDER	D3274-D-1	SHEET 1 OF 1	NTS
DRAWN	CHECKED	MFG. APPR	A	PPROVED M	DE APPR.	
DATE 09.06	.17 DATE 09.06	DATE OF		ATE 09/06/29	DATE 09 06.23	

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

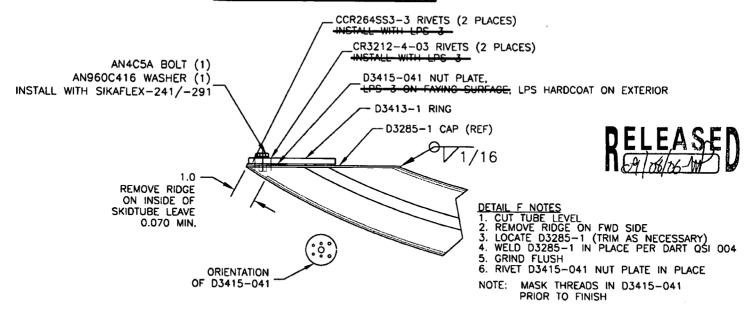
AMEND NOTE 8: "SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.

COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER "

AMEND DETAIL F AS SHOWN.

wh who

DETAIL F: END FINISHING DETAIL



W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
*								

Part No:	PAR #:	Fault Category:	NCR: Yes No DQA:	Date:
Resolution:	.	Disposition:	QA: N/C Closed:	Date:

NCR:		, T.	WORK ORI	DER NON-CONFORMANC	E (NCR)			
		Description of NC		Corrective Action Section B			Ammuoval	Ammanal
DATE	STEP	Section A	Initial Chief Eng			Verification Section C	Approval Chief Eng	Approval QC Inspector
								7
				.4			·	
								:
					:			
				do.			* *	
·.		i y		* * *		<u>'</u>	·	
ı								, '

NO.	Jus	
\sim .	$\alpha \sim$	

AWS D17.1.2001 QUALIFICATION TEST RECORD

		_
	*-	
. •	,	

TEST REQUIREMENTS AND RESULTS

Visual: Penetration: <u>UNACCEPTABLE</u>	pass[i] fail[] pass[] fail[]
Cracks: Undercut: Pin holes: Overlap (cold lap) Porosity (surface): Coloration:	pass[/] fail[]
Qualifier Danlay Elliot	Date of Test Coupon 10.09.30 Date of Test Coupon 10.09.30

The above named individual is qualified in accordance with AWS D17.1.2001 to weld.